ABSTRACT OF THE DISCLOSURE

The present invention concerns optical transmission units and provide simply structured and highly reliable optical modules or optical transmission units which are especially suitable for a low cost optical transmission system.

A semiconductor optical device according to the present invention, which is mounted junction down on a mounting plate via the solder metal of the mounting plate, is characterized in that the electrode facing the mounting plate is partially coated with a dielectric film and the dielectric film is in contact with the solder metal on the mounting plate.

The present invention can suppress reaction between the semiconductor optical device and the solder metal of the mounting plate without deteriorating thermal conductivity between the semiconductor optical device and the mounting plate. Therefore, it is possible to raise the reliability of the semiconductor optical device mounted junction down since diffusion of the solder metal into the semiconductor can be prevented.